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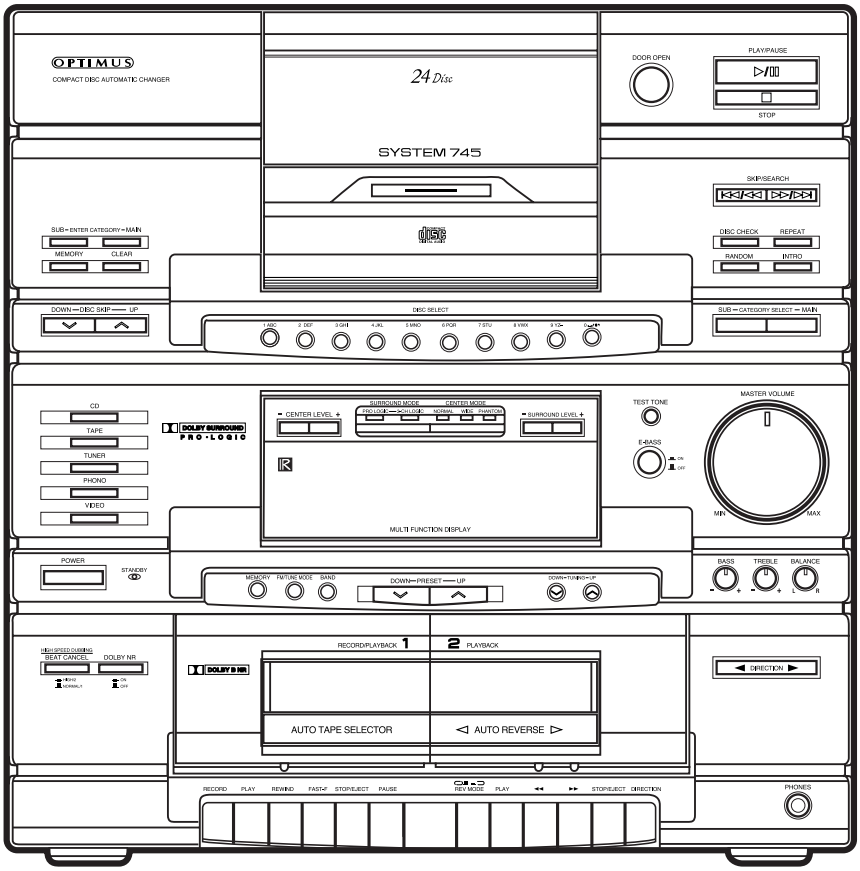
Owner's Manual

Cat. No. 13-1293

System 745
Stereo Rack System

Please read before using this equipment.



OPTIMUS®

Warning: To prevent fire or shock hazard, do not expose this system to rain or moisture.

CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT OPEN.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

This symbol is intended to alert you to the presence of uninsulated dangerous voltage within the system's enclosure that might be of sufficient magnitude to constitute a risk of electric shock. Do not open the system's case.

This symbol is intended to inform you that important operating and maintenance instructions are included in the literature accompanying this system.

Important:

- Remove the protective cardboard sheet before you use the system (see "Unpacking the System" on Page 8).
- Remove all CDs from the CD changer before you move the system.

Copyright Notice: Most material on compact discs and prerecorded tapes is copyrighted. The unauthorized recording or duplication of copyrighted material is a violation of the copyright laws of most countries and such duplication may result in fines and/or imprisonment. Note, however, that in the United States, it is not a violation of U.S. copyright laws for a consumer to use an audio recording device to duplicate musical recordings for noncommercial (personal) use.

The System 745 is made and tested to meet exacting safety standards. It meets UL and FCC requirements and complies with safety performance standards of the U.S. Department of Health and Human Services.

Warnings:

- This system uses a laser light beam on the CD changer. Only a qualified service person should remove the cover or attempt to service this device, due to possible eye injury.
- The use of controls, adjustments, or procedures other than those specified herein might result in hazardous radiation exposure.

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Optimus is a registered trademark used by Tandy Corporation.
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Dolby Noise Reduction and Pro Logic are manufactured under license from Dolby Laboratories.
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FEATURES

Your Optimus System 745 Stereo Rack System is a versatile sound system combining a 100 watt-per-channel amplifier with Dolby Pro Logic Surround Sound, precision AM/FM stereo receiver, dual-dubbing cassette deck, 24-disc automatic CD changer, and front, center, and rear speakers.

The 100-watt, three-way front speakers combine 10-inch woofers, 4-inch midranges, and 3-inch tweeters to give you excellent response in all frequency ranges. The efficient bass-reflex design provides a cleaner sound than acoustic suspension speakers.

The 15-Watt, full range center and surround speakers' simulated black wood-grain veneer cabinets finish make the speakers attractive, and the cabinet design enhances the bass response.

The CD changer can hold up to 24 5-inch CDs and organizes them much like a jukebox would, so you can play them easily without having to continually remove and load CDs.

Note: You need two AA batteries (not supplied) to power the remote control.

STEREO TUNER

Digital Synthesized Tuning — eliminates tuning drift by locking the tuner on the selected frequency.

Preset Tuning Memories — let you store 24 FM and 12 AM stations for quick tuning.

CD CHANGER

Rotating CD Storage Compartment — provides a virtually dust-free CD compartment with a storage tray that safely protects up to 24 of your CDs, and quickly accesses any CD by rotating the tray in either direction.

Category Playback — lets you assign any one of seven preset music categories (or a category or subcategory of your own) to each loaded CD, then play only the CDs assigned to a selected category or subcategory.

Fluorescent Scrolling Display — scrolls messages to help you easily operate the CD changer.

Sequence Track Programming — lets you program up to 48 selections (tracks or entire CDs) to play in any order you choose.

Intro Scan — scans and plays the first 10 seconds of each track so you can easily find the one you want.

Random Play — randomly selects and plays all tracks on one CD at a time, or all tracks on all loaded CDs.

Repeat Play — automatically repeats a single track, all tracks on a single CD, all tracks on all loaded CDs, or a programmed sequence.

Audible Search — lets you rapidly play a CD in either direction to locate a particular section of a track.

Direct Selection Play — lets you quickly select any track from any loaded CD.

DUAL CASSETTE DECK

Consecutive Play — automatically plays both sides of one tape, then one side of another tape.

Auto-Reverse (Deck 2 only) — you can set Deck 2 to continuously play both sides of a tape.

Dolby B Noise Reduction System — reduces tape hiss to enhance dynamic range and sound quality.

Synchro Tape Dubbing — lets you easily dub (copy) tapes.

Two Dubbing Speeds — let you dub (copy) a cassette tape at high or normal speed.

SPEAKERS

Superior Speaker Elements — meet our rigid requirements for excellence.

Decorative Cloth Grilles — hides the speaker drivers without obstructing the sound.

OTHER FEATURES

Front, Center, and Surround Speakers — provides everything you need for home theater sound.

Motorized Volume Control — automatically rotates the main volume control when you use the remote control to adjust the system's volume.

Automatic Volume Reset — automatically reduces the volume when you turn on the system the first time, to protect connected speakers, headphones, and your hearing.

Extended-Bass — lets you emphasize low bass sounds during low-volume listening.

Headphone Jack — lets you connect headphones (not supplied) for private listening.

We recommend you record the serial number of the System 745 here. The number is on the system's back panel.

Serial Number: _____

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THE FCC WANTS YOU TO KNOW

This equipment complies with the limits for a Class B digital device as specified in Part 15 of *FCC Rules*. These limits provide reasonable protection against radio and TV interference in a residential area. However, your equipment might cause TV or radio interference even when it is operating properly.

To eliminate interference, you can try one or more of these corrective measures.

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the radio or TV.
- Use outlets on different electrical circuits for the equipment and the radio or TV.

Consult your local RadioShack store if the problem still exists.

You must use shielded interface cables with this equipment.

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PREPARATION

Cautions:

- Do not connect the system to AC power until you complete all other connections.
- Be sure to follow all the instructions in the enclosed "Safety Instructions" sheet.

UNPACKING THE SYSTEM

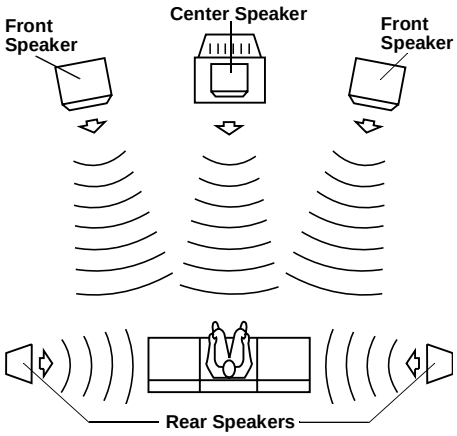
The protective cardboard sheet in the system's CD compartment helps protect the system from damage during shipment or while moving it. To remove the cardboard sheet, first remove all packing material from around the system, then press **DOOR OPEN**. When the CD changer's door opens, remove the cardboard sheet, then close the door.

Note: Save the cardboard sheet in case you ever want to move the system to another area. Before you move the system, be sure there are no CDs in the CD changer, then re-insert the cardboard sheet into the CD changer's center slot.

The system speakers' features and specifications are packed with the speakers.

PLACING THE SPEAKERS

The System 745 includes one center, two front, and two rear (surround) speakers. Before you connect them, follow these steps to place the speakers.



1. Place the center speaker directly in front of the listening area, above or below the TV.

   Note: The center speaker is magnetically shielded to prevent video distortion. However, if the TV picture has interference, increase the distance between the TV and the speaker, but keep the speaker in line with the TV.

2. For the best stereo effect, place the front speakers on each side of the center speaker so:

   - the distance between each speaker and the center speaker is the same
   - the distance between the speakers is the same as the distance between the listening area and the center speaker

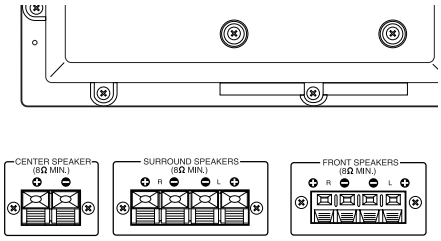
   Notes:

   - To improve the stereo effect if the distance between the speakers is greater than the distance between the listening area and the center speaker, angle the speakers in toward you.
   - To increase the bass effect, place the front speakers in the corners of the room, against the wall, or directly on the floor.
   - To decrease the bass effect, move the front speakers slightly away from the corners or raise them 6 to 8 inches off the floor. Your local RadioShack store carries speaker stands.

3. Place the surround speakers to the rear and sides of the listening area.

CONNECTING THE SPEAKERS

For the best results, connect the two front speakers to the **FRONT SPEAKERS** terminals, the center speaker to the **CENTER SPEAKER** terminals, and the two rear speakers to the **SURROUND SPEAKERS** terminals on the back of the system.



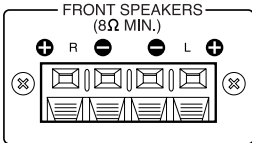
Important:

- If you are using speakers other than the ones supplied, remember that each speaker connected to the system's speaker terminals must have an impedance of at least 8 ohms. Your local RadioShack store has a large selection of speakers.
- For maximum bass response and best overall performance, connect your speakers so their polarities match (+ to +, and – to –).

Caution: Do not let the bare speaker wires touch each other. This might damage the system or the speakers.

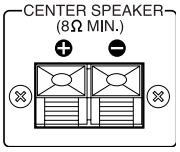
Front Speakers

1. Press the left front speaker's positive **(+)** red terminal tab, insert one stripped end of the supplied red speaker wire into the terminal, then release the tab.
2. Press the left front speaker's negative **(–)** black terminal tab, insert one stripped end of the supplied black speaker wire into the terminal, then release the tab.
3. Press the system's **FRONT SPEAKERS L (+)** red speaker terminal tab, insert the stripped end of the left front speaker's red conductor into the terminal, then release the tab.



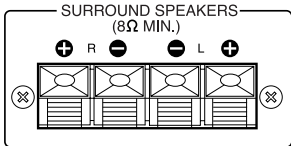
4. Press the system's **FRONT SPEAKERS L (–)** black speaker terminal tab, insert the stripped end of the left front speaker's black conductor into the terminal, then release the tab.
5. Repeat Steps 1–4 to connect the right front speaker to the system's **FRONT SPEAKERS R** terminals.

Center Speaker



1. Press the **CENTER SPEAKER (+)** red speaker terminal tab, insert the stripped end of the center speaker's brown conductor with white stripe into the terminal, then release the tab.
2. Press the **CENTER SPEAKER (–)** black speaker terminal tab, insert the stripped end of the center speaker's brown conductor into the terminal, then release the tab.

Surround Speakers



1. Press the **SURROUND SPEAKERS L (+)** red speaker terminal tab, insert the stripped end of the left rear speaker's brown conductor with white stripe into the terminal, then release the tab.
2. Press the **SURROUND SPEAKERS L (–)** black speaker terminal tab, insert the stripped end of the left rear speaker's brown conductor into the terminal, then release the tab.

3. Repeat Steps 1 and 2 to connect the right rear speaker to the **SURROUND SPEAKERS R (+)** and **(–)** terminals.

CONNECTING THE ANTENNAS

You can use the supplied indoor AM loop antenna and FM dipole antenna for adequate reception in most areas.

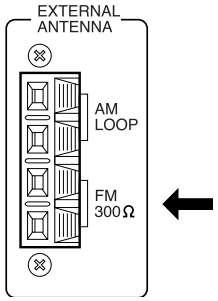
Connecting an FM Antenna

The supplied FM antenna is usually adequate for FM reception in metropolitan areas. If FM reception is weak, we recommend you use an outdoor antenna for improved reception. Your local RadioShack store sells outdoor antennas and accessories.

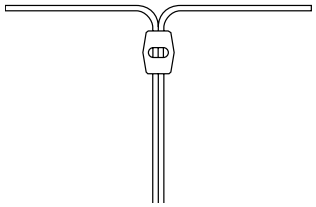
Note: If you install an outdoor antenna, follow all the instructions in the enclosed "Safety Instructions" sheet and the warnings included with the antenna. Use 300-ohm twin lead wire for this connection.

Warning: Use extreme caution when you install or remove an outdoor antenna. If the antenna starts to fall, let it go! It could contact overhead power lines. If the antenna touches the power line, contact with the antenna, mast, cable, or guy wires can cause electrocution and death. Call the power company to remove the antenna. DO NOT attempt to remove it yourself.

To connect an FM antenna, hold down both **EXTERNAL ANTENNA FM 300Ω** terminal tabs, insert the stripped ends of the FM antenna's wires into the terminal's holes, then release the tabs.

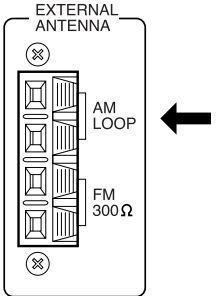


Fully extend and position the FM antenna for the best reception.



Connecting the AM Loop Antenna

1. Unwind the supplied AM loop antenna wires about two turns.
2. Hold down both **EXTERNAL ANTENNA AM LOOP** terminal tabs, insert the stripped ends of the antenna's wires into the holes, then release the tabs.



3. Position the AM loop antenna for the best reception.

CONNECTING OTHER AUDIO SOURCES

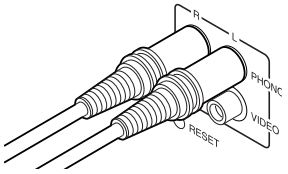
Connecting a Turntable

Caution: Do not place a turntable on top of the system or on any other component that gets hot.

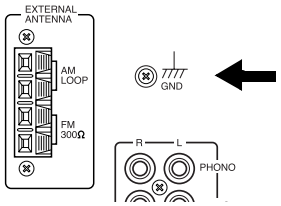
Notes:

- The turntable's cables must have phono-type plugs.
- Be sure to match the left and right plugs on the cables with the **PHONO L** and **R** jacks on the system.

1. Plug the turntable's cables into the **PHONO L** (white) and **R** (red) jacks on the back of the system.



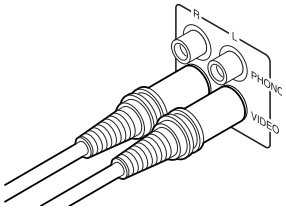
2. If the turntable has a ground wire, use a Phillips screwdriver to connect it to the **GND** ⏚ terminal on the back of the system.



Connecting Video Equipment

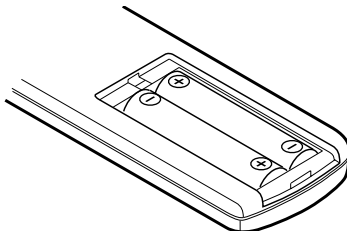
If you have a VCR or other equipment, such as a video disc player or a TV that has line-level audio outputs, you can play the sound through the System 745.

Use a stereo cable (such as Cat. No. 42-2352, not supplied) to connect the source's left and right audio output jacks to the **VIDEO L** (white) and **R** (red) jacks on the back of the system.



PUTTING BATTERIES IN THE REMOTE CONTROL

The system's remote control requires two AA batteries (not supplied) for operation. For the longest life and best performance, we recommend alkaline batteries, such as RadioShack Cat. No. 23-557.



1. Remove the battery compartment cover by pressing down the top of the cover while sliding it away from the remote control.
2. Insert two fresh AA batteries in the compartment as indicated by the polarity symbols (+ and –) marked inside the compartment.

   Cautions:

   - Use only fresh batteries of the required size and type.
   - Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.
3. Replace the cover.

If the remote control does not work or has poor range, replace both batteries.

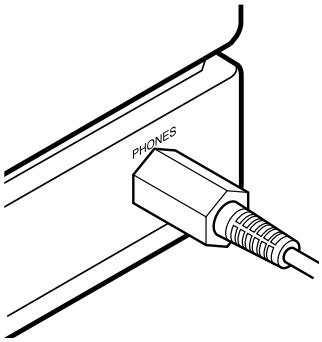
Cautions:

- Dispose of batteries promptly and properly; do not bury or burn them.
- Never leave dead or weak batteries in the remote control.

CONNECTING HEADPHONES

You can connect a pair of headphones to the System 745 to listen in private. Your local RadioShack store has a wide selection of headphones.

To connect headphones to the system, put the headphones' 1/4-inch plug into the **PHONES** jack on the system.



Note: Connecting the headphones automatically disconnects the external speakers. If you are using the surround mode, however, connecting the headphones does not disconnect the center and rear speakers.

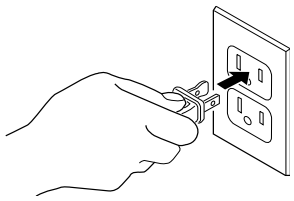
Listening Safely

To protect your hearing, follow these guidelines when you use headphones.

- Set the volume to the lowest setting before you begin listening. After you begin listening, adjust the volume to a comfortable level.
- Do not listen at extremely high volume levels. Extended high-volume listening can lead to permanent hearing loss.
- Once you set the volume, do not increase it. Over time, your ears adapt to the volume level, so a volume level that does not cause discomfort might still damage your hearing.

CONNECTING POWER

After you make all other connections, plug the system's power cord into a standard AC outlet. The red STANDBY indicator lights when the system is connected to AC power but the system is turned off.



Note: The system saves all stored stations and category and subcategory names even when you unplug it from the AC outlet.

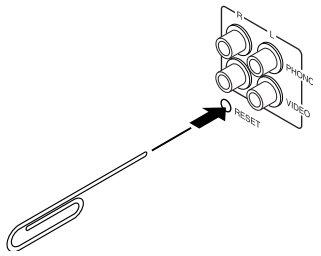
RESETTING THE SYSTEM

If **M-ERROR** scrolls across the display, or the system does not work properly when CD is selected, make sure the protective cardboard sheet has been removed. After removing the cardboard, if the system still does not work properly, you might need to reset it.

Note: If you have programmed a sequence of tracks to play (see "Programmed Play" on Page 36), resetting the System 745 clears that sequence from memory.

Follow these steps to reset the system.

1. Unplug the power cord from the AC outlet.
2. Use the straightened end of a paper clip to hold down **RESET** on the back of the system for about 20 seconds.



3. Plug the power cord back into the AC outlet.
4. Press **POWER** to turn on the system. The STANDBY indicator turns off.

OPERATION

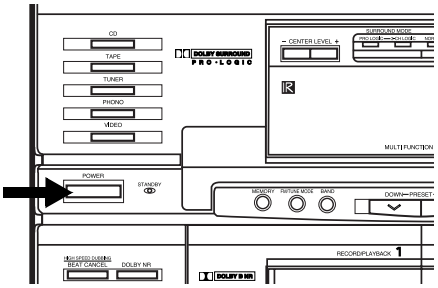
BASIC OPERATION

Cautions:

- The system automatically reduces the volume the first time you turn it on after you install it. To protect your hearing after that, set the volume to its lowest level before you turn it on.
- Do not set the system's volume too high while playing soft or quiet portions of a music program. Due to the system's wide dynamic range, the speakers might be damaged if the music program produces a sudden loud passage.

Follow these steps to operate your system.

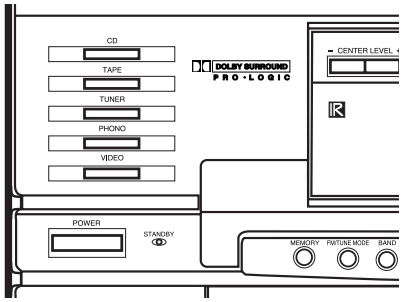
1. Press **POWER** to turn on the system.



POWER ON scrolls across the display, the STANDBY indicator turns off, and the **CD**, **TAPE**, **TUNER**, **PHONO**, and **VIDEO** function buttons light.

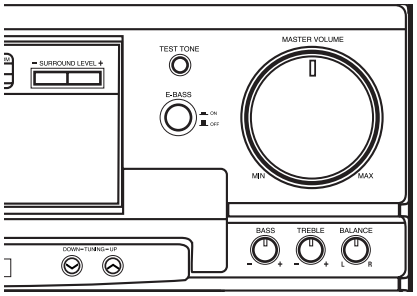
Note: The function selected when the system was last turned off lights red; all others light green.

2. Press **CD**, **TAPE**, **TUNER**, **PHONO** or **VIDEO** on the system to select the desired audio source. The selected source's indicator lights red.

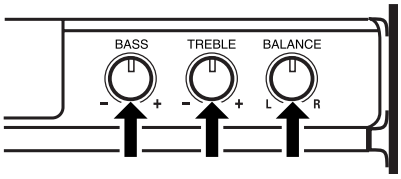


3. If the source to be played is encoded with Dolby Surround Sound, select the desired Dolby Surround Mode (see "Selecting the Dolby Surround Mode" on Page 17).
4. Start the source or tune to the desired station.

5. Adjust **MASTER VOLUME** on the system (or press **MASTER VOL –** or **+** on the remote control) to a comfortable listening level.



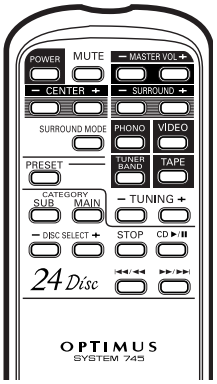
6. Adjust **BASS**, **TREBLE,** and **BALANCE** for the desired stereo effect.



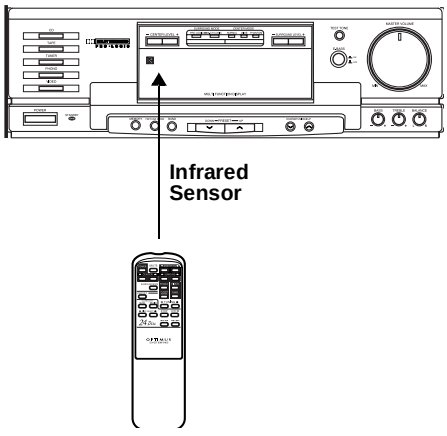
7. To turn off the system, press **POWER** again. **GOOD-BYE** scrolls across the display, the STANDBY indicator lights, and the system turns off.

USING THE REMOTE CONTROL

The buttons on the remote control perform the same functions as similarly marked buttons on the system's front panel.



To use the remote control, point it directly at the infrared sensor on the left side of the system's display, then firmly press the desired button. The remote control works up to about 20 feet away.



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DOLBY PRO LOGIC SURROUND

Dolby Surround is a process that makes movies more exciting by creating a more realistic audio experience to accompany the action on the screen. Rather than all the sound coming from the front of the theater (or your living room), the sound seems to surround you, making you feel like you are closer to the action.

The Pro Logic technology makes home theater sounds more realistic. The Pro Logic decoder separates the audio according to the apparent location of the source. You hear dialogue from the center speaker, normal stereo background sound from the left and right front speakers, and enhanced surround sound from the rear speakers.

Dolby Surround Encoded Material

Program sources such as laser discs, video tapes, and cable broadcasts are usually direct copies of the original motion picture's sound track. All these sources have surround sound audio if the original sound track had it. Many video tapes and laser discs are marked with the DOLBY SURROUND™ logo. However, many that are not marked also have surround sound audio.

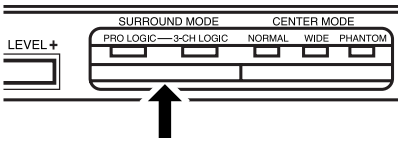
In addition, many television stations broadcast regular programs with Dolby Surround. Also, most satellite programs, especially movies, are broadcast with Dolby Surround.

The System 745 gives you the best sound performance from music sources that have the DOLBY SURROUND™ logo.

Selecting the Dolby Surround Mode

When playing a program source encoded with Dolby Surround Sound, follow these steps to select the proper surround mode.

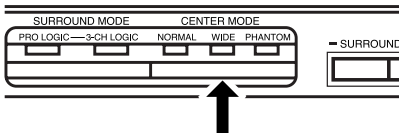
1. Repeatedly press **SURROUND MODE** until the desired Dolby Pro Logic Surround mode (PRO LOGIC or 3-CH LOGIC) indicator lights.



   - Select PRO LOGIC when using front, center, and rear speakers.
   - Select 3-CH LOGIC when using only front and center speakers. The sound that would normally come from the surround (rear) speakers is routed to and combined with the sound that comes from the left and right front speakers.

- Select OFF (so neither indicator lights) when using stereo headphones, playing a monaural program, or receiving a weak FM broadcast (the sound quality might improve).

2. If you selected PRO LOGIC and you connected the supplied front, center, and rear speakers, then repeatedly press **CENTER MODE** until the WIDE indicator lights.



If you selected PRO LOGIC and you connected speakers other than the ones supplied, repeatedly press **CENTER MODE** to select one of the following operating modes:

NORMAL: Select this mode when using a center speaker with limited low-frequency response. The low-frequency sounds present at the center of the screen are routed equally to the front left and right speakers. This creates the illusion that the sound is coming from the center.

WIDE: Select this mode when using a full-range center speaker that has good low-frequency response. The low-frequency sounds present at the center of the screen are routed to the center speaker.

PHANTOM: Select this mode when not using a center speaker. The sound present at the center of the screen is routed equally to the left and right front speakers. This creates the illusion that the sound is coming from the center.

3. Press **TEST TONE**. The test tone sounds from each speaker for about 2 seconds. (If connected, both surround speakers sound the tone at the same time.)

4. Slowly turn **MASTER VOLUME** on the system (or hold down **MASTER VOL –** or **+** on the remote control) until the test tone sounds at a comfortable level.

5. Press **CENTER LEVEL –** or **+** on the system (or **CENTER –** or **+** on the remote control) until the volume level for the center speaker is the same as the front speakers.

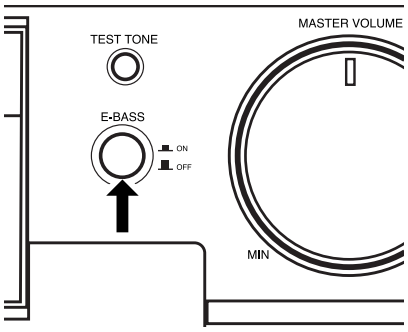
6. Press **SURROUND LEVEL –** or **+** on the system (or **SURROUND –** or **+** on the remote control) until the volume level for the rear speakers is the same as the front speakers.

7. Press **TEST TONE** to turn off the test tone.

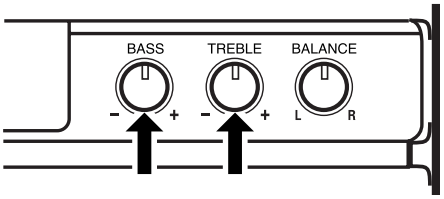
Note: When Dolby Pro Logic is not on, **MASTER VOLUME** on the system (or **MASTER VOL –** or **+** on the remote control) affects only the sound level from the front speakers. When using stereo headphones, turn off Dolby Surround.

ADJUSTING THE SOUND

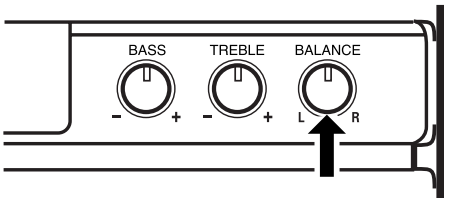
Press **E-BASS** (extended bass) to **ON** to emphasize bass sounds. To cancel extended bass, press **E-BASS** again.



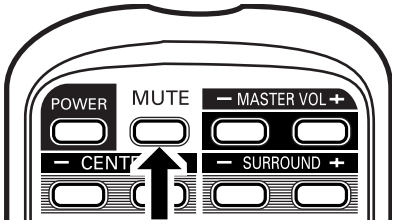
Adjust **BASS** to increase or decrease the low frequencies. Adjust **TREBLE** to increase or decrease the high frequencies.



Use **BALANCE** to adjust the output level (balance) between the left and right channel of the front speakers or headphones.



Press **MUTE** on the remote control to silence the sound. **MUTE** blinks on the display. To return to the previous volume level, press **MUTE** again.



USING THE TUNER

Press **TUNER** on the system (or **TUNER/BAND** on the remote control). The tuner automatically tunes to the station that was playing when you last turned it off. The station's frequency and band (**AM** or **FM**) appears on the display.

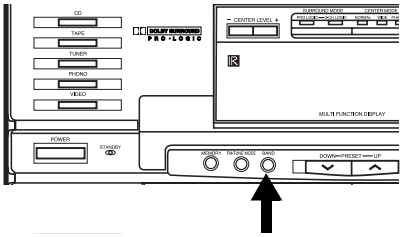
When you receive an FM station in stereo, **STEREO** appears on the display.

If FM stereo reception is noisy, press **FM/TUNE MODE** on the system until **MONO** appears on the display and **AUTO** disappears. The sound is no longer in stereo, but the reception should improve.

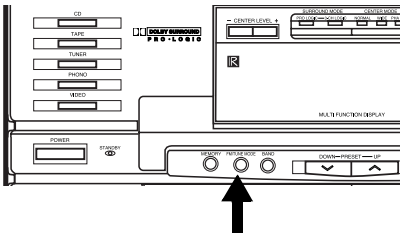
You can tune to other AM or FM radio stations using manual, seek, or memory tuning.

MANUAL TUNING

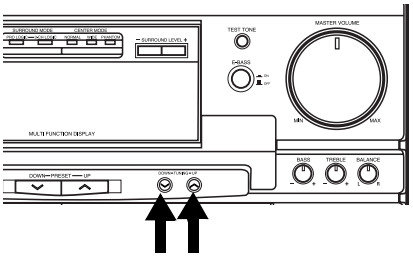
1. Press **BAND** on the system (or **TUNER/BAND** on the remote control) until **AM** or **FM** appears on the display.



2. Repeatedly press **FM/TUNE MODE** on the system until **AUTO** disappears from the display.



3. Repeatedly press (or hold down) **TUNING DOWN** or **UP** to tune down or up the selected band.



SEEK TUNING

Follow these steps to tune to the next higher or lower station with a strong signal.

1. Repeatedly press **BAND** on the system (or **TUNER/BAND** on the remote control) until **AM** or **FM** appears on the display.
2. Repeatedly press **FM/TUNE MODE** on the system until **AUTO** appears on the display.
3. Press **TUNING DOWN** or **UP**. The system automatically tunes to the next strong station.

MEMORY TUNING

You can automatically or manually store up to 36 stations (AM or FM) in the system's memory.

Note: The tuner keeps the stored stations even when you turn off the system or unplug it from the AC outlet.

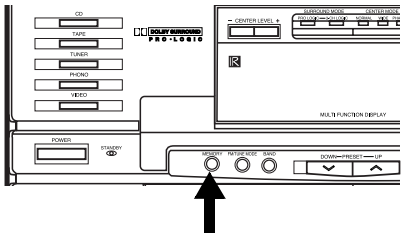
Automatically Storing Stations

You can set up the system so it automatically stores FM and AM stations. During auto store, the system first scans the FM band and automatically stores the first 24 strong FM stations it finds into memory locations 1–24.

Then the system scans the AM band and stores the first 12 strong AM stations it finds into memory locations 25–36.

Follow these steps to set up the system so it automatically stores FM and AM stations.

1. Hold down **MEMORY** (next to **FM/TUNE MODE**) for about 3 seconds. **CH** and **--** appear and **MEMORY** flashes on the display.



   Note: Use only the **MEMORY** button next to **FM/TUNE MODE** on the tuner to automatically store stations. (The **MEMORY** button next to **CLEAR** on the CD changer performs another function.)

2. When both **MEMORY** and **AUTO** flash on the display, release **MEMORY**.

After the system stores all FM and AM stations into memory, it tunes to the first stored FM station (memory location 1) and begins to play.

Notes:

- If the system cannot find enough FM stations to fill the first 24 memory locations, it switches to the AM band and searches for AM stations, storing any it can find in the remaining memory locations.
- If the system cannot find enough AM stations to fill all the remaining available memory locations, the remaining memory locations will be left blank.
- To stop automatically storing stations before the system stores all stations, press **MEMORY** (next to **FM/TUNE MODE**) on the system.

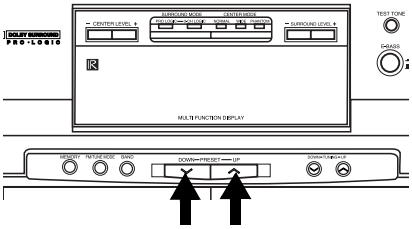
Manually Storing Stations

1. Tune to the station you want to store.
2. Briefly press **MEMORY** (next to **FM/TUNE MODE**) on the system. **- -** and **CH** appear, and **MEMORY** flashes on the display for about 10 seconds.

   Notes:

   - Do not hold down **MEMORY**. This causes the system to automatically store stations into all of its memory locations.
   - Use only the **MEMORY** button next to **FM/TUNE MODE** on the tuner to automatically store stations. (The **MEMORY** button next to **CLEAR** on the CD changer performs another function.)

3. Within 10 seconds, repeatedly press **PRESET DOWN** or **UP** to select the memory location where you want to store the station.



   Note: If you do not press **PRESET DOWN** or **UP** within 10 seconds, **– –**, **CH**, and **MEMORY** disappear from the display. Simply begin again at Step 2.

4. When the memory location you want to use appears, press **MEMORY** within 10 seconds. **MEMORY** disappears, and the display shows the selected memory location next to **CH**.

Selecting Preset Stations

To select a preset station, repeatedly press **PRESET DOWN** or **UP** (or **PRESET** on the remote control).

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CHANGING THE TUNING INCREMENT

The System 745's tuner is preset to tune frequencies that are broadcast in increments of 10 kHz for AM and 200 kHz for FM, which is standard in the United States.

If you use the System 745 in Europe or other parts of the world where frequencies are broadcast in increments of 9 kHz for AM and 50 kHz for FM, you can change the system's tuning increment.

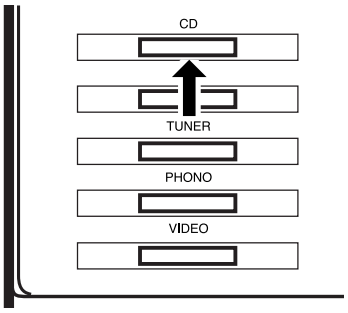
Important: The System 745 clears all the stations stored in memory when you change the tuning increment.

Follow these steps to change the tuning increment.

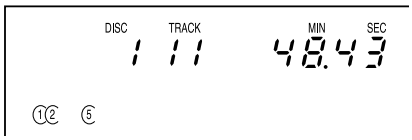
1. Select AM or FM (wherever you want to change the tuning increment).
2. Press **POWER** to turn off the system.
3. While you hold down **BAND**, press **POWER**. The tuning increment changes to the other setting.
4. To verify that the tuning increment for the selected band has changed, press **TUNING DOWN** or **UP** to tune down or up the band.

USING THE CD CHANGER

Press **CD** on the system to select the CD changer function.



- If CDs are loaded, the display's upper line shows the current CD's information (**DISC** and the CD's number, **TRACK** and the total number of tracks, and the total playing time).



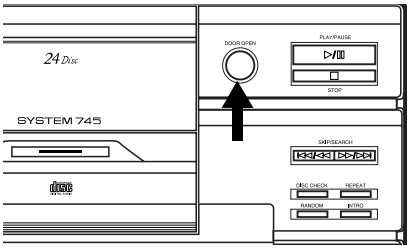
- If no CDs are loaded, the display shows **DISC**, CHANGE, and the last-selected disc number.

Warning: To avoid personal injury and damage to the CD changer and CD, do not put your fingers or the CD inside the CD changer any further than necessary to load and unload it.

LOADING CDS

Important: Make sure you remove the protective cardboard sheet from the CD compartment before you load and play CDs (see "Unpacking the System" on Page 8).

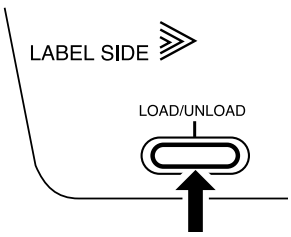
1. Press **DOOR OPEN**. The CD changer's door opens.



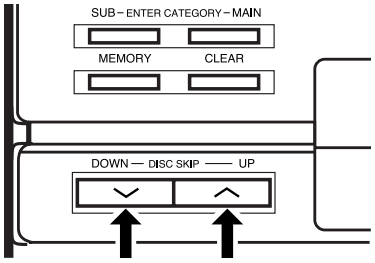
Cautions:

- Do not apply excessive force to the CD changer's door when it is open. This could damage the CD changer.
- To prevent dust from entering the system, always keep the CD changer's door closed except when loading or unloading CDs.

2. If you do not see CHANGE on the display, press **LOAD/UNLOAD** inside the CD changer's door.



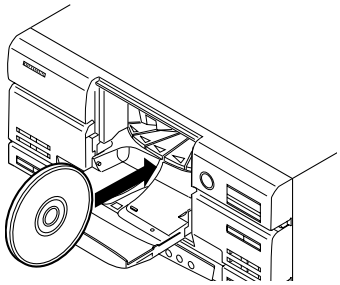
3. Repeatedly press **DISC SKIP DOWN** or **UP** on the CD changer (or **DISC SELECT –** or **+** on the remote control) until **DISC** and the disc number you want to select appear on the display's upper line, and the disc number flashes on the display's lower line. The platform inside the CD changer rotates the slot for that disc number to the front.



Cautions: To prevent damage to the CD changer:

- Do not manually rotate or stop the platform while it is rotating.
- Do not load or unload a CD while the platform is rotating.

4. To load a CD, hold it vertically by the edges with the label side to the right, then gently insert it into the slot in the center of the CD changer.



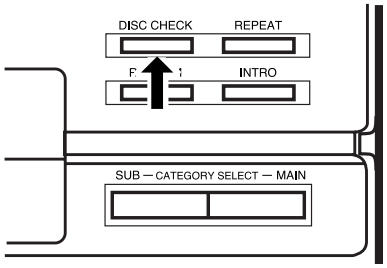
Cautions: To prevent damage to the CD:

- Load only CDs that are marked with:

COMPACT disc DIGITAL AUDIO

- Do not load anything other than 5-inch CDs into the CD changer. Do not load single 3-inch CDs with any type of adapter device.
- Do not load more than one CD into the same slot.
- Do not force a CD into the loading slot. (While loading a CD, always gently insert the CD into the loading slot, then release it.)

5. Repeat Steps 3–4 to load up to 24 CDs.
6. Push the CD changer's door up until it clicks to close it.
7. Press **DISC CHECK**. **CHECKING DISCS** scrolls once and flashes three times on the display.



The CD changer selects each slot on the platform and checks only for the presence of a CD in each slot on the platform, not if the CD is defective or loaded incorrectly.

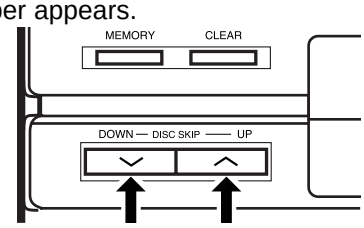
After the CD changer checks all disc trays, the display shows each loaded CD's disc number at the bottom of the display surrounded by a graphic.

To assign a category or subcategory to a CD (see "Assigning Category and Subcategory Names to Loaded CDs" on Page 31).

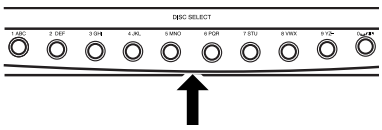
SELECTING A CD

With play stopped, select the CD you want to play or eject one of two ways.

- Repeatedly press **DISC SKIP DOWN** or **UP** on the CD changer (or **DISC SELECT** – or **+** on the remote control) until the disc number appears.



- Press the appropriate **DISC SELECT** key(s) on the CD changer until the disc number appears.



For example, to select disc number 23, press **2/DEF**, then **3/GHI**. (Precede single-digit numbers with a **0**. For example, to select disc number 3, press **0-/***, then **3/GHI**.)

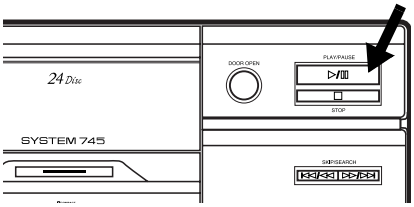
Note: If you select a number that does not have a CD assigned to it, **NO DISC** appears on the display.

REMOVING CDS

1. With play stopped, select the CD you want to eject.
2. Press **DOOR OPEN**. The CD changer's door opens.
3. Press **LOAD/UNLOAD** inside the CD changer's door. CHANGE appears on the display, the platform moves the selected CD to the slot and the graphic around the selected CD's number disappears.
4. After the platform stops, gently remove the CD from the CD slot.
5. To remove more CDs, select the CD then repeat Steps 3–4.
6. Close the door.

PLAYING CDS

1. With play stopped, select the CD you want to play.
2. Press **PLAY/PAUSE** on the CD changer (or **CD ⏯** on the remote control).



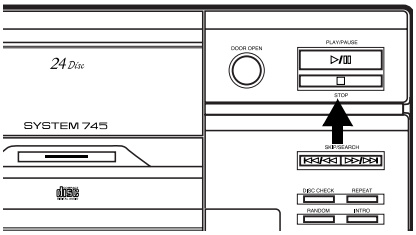
PLAY and ▷ appear, and **SEARCHING DISC** and the CD's number scroll across the display. After a few seconds, the selected CD begins to play from Track 1.

While a CD plays, the CD changer displays the current disc number (blinking inside the graphic), the current disc number and track number, the current index number (if the CD has index numbers — numbers that mark sections within a track) or **1** if the CD does not have index numbers, and the elapsed time for the current track (in minutes and seconds).

Notes:

- If **DISC ERROR** scrolls across the display or if the graphic around the current disc number blinks, the CD might be loaded incorrectly or scratched.
- A sudden shock or jolt while a CD is playing might suddenly change the CD's rotation speed or make the CD changer skip the current track. This might momentarily mute or distort the sound. This is not a malfunction.
- To temporarily stop play, press **PLAY/PAUSE** on the CD changer (or **CD ⏯** on the remote control). **PLAY**, ▷, and the disc number surrounded by a graphic flash on the display. To resume play, press **PLAY/PAUSE** (or **CD ⏯**) again.

3. To stop play, press **STOP**. The CD changer displays the selected CD's total play time.



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SKIPPING TRACKS

To skip backward or forward to another track (while a CD is playing, paused, or stopped), repeatedly press **SKIP/SEARCH** |◄◄/◄◄ or ►►/►► until the desired track number appears. The CD changer skips to the selected track, then plays it.

To skip to a track on another CD, repeatedly press **DISC SKIP DOWN** or **UP** on the CD changer (or **DISC SELECT –** or **+** on the remote control) until the disc number for the desired CD appears, then repeatedly press **SKIP/ SEARCH** |◄◄/◄◄ or ►►/►► until the desired track number appears.

Notes:

- If you use skip play while a CD is paused, the CD remains paused when the CD changer skips to the selected track.
- If you start skip play during random play, the CD changer cancels random play (see “Random Play” on Page 29).

AUDIBLE SEARCH

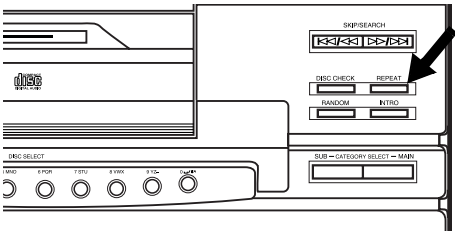
To search for a particular section of a track (while a CD is playing), hold down **SKIP/SEARCH** |◄◄/◄◄ or ►►/►►. The CD changer rapidly plays the CD either backward or forward (like reviewing or cueing a cassette tape) and automatically reduces the CD’s volume if the CD was playing. When you reach the desired section, release **SKIP/SEARCH** |◄◄/◄◄ or ►►/►► to resume normal play.

Notes:

- If you use audible search while a CD is paused, you do not hear any sound and the CD remains paused when you release **SKIP/ SEARCH** |◄◄/◄◄ or ►►/►►.
- If the current CD reaches the end while you hold down **SKIP/ SEARCH** ►►/►►, the CD changer pauses at the beginning of Track 1 on the next CD, unless you selected **REPEAT ALL** (see “Repeat Play” on Page 29).
- If the current CD reaches the beginning while you hold down **SKIP/SEARCH** |◄◄/◄◄, the CD changer pauses at the beginning of Track 1 on the current CD.
- If you use audible search during random play, the CD changer cancels random play (see “Random Play” on Page 29).

REPEAT PLAY

You can repeat a single track on any loaded CD, all tracks on a selected CD, all tracks on all loaded CDs, or a programmed sequence (see "Programmed Play" on Page 36).

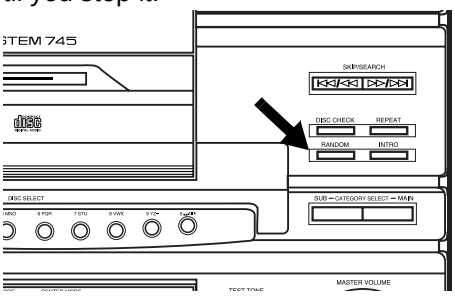


- To repeat a single track, repeatedly press **REPEAT** until **REPEAT ONE** appears on the display.
- To repeat all tracks on a CD or in a programmed sequence, repeatedly press **REPEAT** until **REPEAT ALL** appears on the display.
- To repeat all loaded CDs and tracks, press **REPEAT** until **REPEAT CONTINUE** appears on the display.
- To repeat a category (see "Category/Subcategory Play" on Page 35), press **CATEGORY SELECT MAIN** so **CATEGORY** appears on the display. Then repeatedly press **REPEAT** until **REPEAT CONTINUE** appears on the display.

To cancel repeat play at any time, repeatedly press **REPEAT** until **REPEAT ONE**, **REPEAT ALL**, and **REPEAT CONTINUE** disappear from the display.

RANDOM PLAY

During random play, the CD changer randomly selects and plays tracks until you stop it.



Note: You cannot use skip play or audible search during random play.

Follow these steps to play random tracks.

1. With play stopped, press **RANDOM** once to select **RANDOM 1**, or twice to select **RANDOM 2**.
   - **RANDOM 1** selects a CD and a track and plays it, then selects another CD and track.
   - **RANDOM 2** selects a CD, then randomly plays all the tracks on that CD once, then selects another CD.
2. Press **PLAY/PAUSE** on the CD changer (or **CD ⏎/⏸** on the remote control) to start random play.

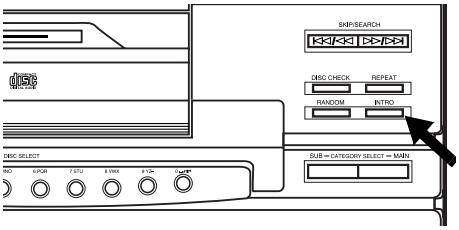
   Note: The CD changer never selects the same track twice in a row from a single CD. However, it might select the same track more than once.

3. To make another random selection during play, press **RANDOM**.
   - In the **RANDOM 1** mode, the CD changer randomly selects another CD and track.
   - In the **RANDOM 2** mode, the CD changer randomly selects another track from the same CD. If all the tracks have been played, the CD changer selects another CD and track.
4. To stop random play, press **STOP**.

To play random selections from a category or subcategory, first select a category or subcategory (see “Category/Subcategory Play” on Page 35), then follow the steps above.

INTRO SCAN

Press **INTRO** to play the first 10 seconds of each track, beginning with the current CD. **INTRO** appears on the display. Press **INTRO** again to return to normal play.



Notes:

- If you press **INTRO** during normal play, intro scan starts with the next track on the CD.
- You can skip to another track during intro scan (see “Skipping Tracks” on Page 28).

ASSIGNING CATEGORY AND SUBCATEGORY NAMES TO LOADED CDS

You can assign a category name to each loaded CD, and then use category names to select and play only those CDs that contain the type of music you want to hear.

In addition to assigning category names, you can further define music styles within the same category by assigning your own subcategory name to the CD.

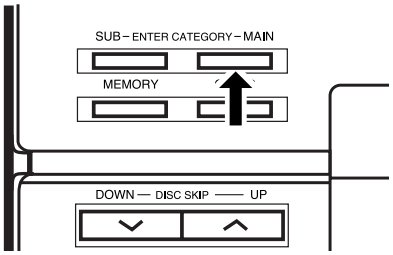
For example, if you load two jazz CDs and assign a JAZZ category name, you can assign subcategory names such as DIXIE or FUSION. You must assign a category to a loaded CD before you can assign a subcategory to it.

Notes:

- The CD changer saves category and subcategory names even when you turn off the CD changer or unplug it from the AC outlet.
- When you assign a category or subcategory name to a loaded CD, the CD changer stores the selected name by disc position number. If you remove a CD then load another CD as that same disc number, the same category and subcategory names apply to the new CD until you change them.

Assigning Preset Category Names

1. With play stopped, select the desired CD.
2. Repeatedly press **ENTER CATEGORY MAIN** on the CD changer until **CATEGORY** and the category name flash.

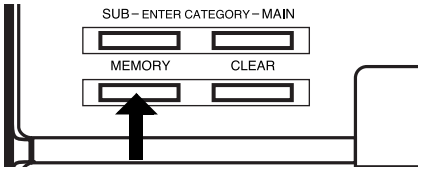


Each time you press **ENTER CATEGORY MAIN**, the CD changer displays these preset category names:

- **ROCK** (Rock)
- **C/W** (Country and western)
- **R/B** (Rhythm and blues)
- **JAZZ** (Jazz)
- **EASY** (Easy listening)
- **SHOW** (Show tunes)
- **CLAS** (Classical)
- _ _ _ _ _ _ _ _ (These blank lines appear so you can create a new category name — see “Creating and Assigning New Category Names” on Page 32.)

Note: If new category names have been created (see "Creating and Assigning New Category Names"), they appear after **CLAS**.

3. When you see the category name you want, press **MEMORY** (next to **CLEAR**) on the CD changer. The selected category name and **IS MEMORIZED** scrolls across the display.



Note: Use only the **MEMORY** button next to **CLEAR** on the CD changer to assign a preset category name. (The **MEMORY** button next to **FM/TUNE MODE** below the display performs a different function.)

Creating and Assigning New Category Names

You can create up to 24 new category names that contains up to 8 characters (including letters, numbers, and special characters). When you create a new category name, it is automatically assigned to the selected CD.

1. With play stopped, select the desired CD.
2. Repeatedly press **ENTER CATEGORY MAIN** on the CD changer until _ _ _ _ _ _ _ _ appears on the display.
3. Repeatedly press the appropriate **DISC SELECT** key on the CD changer until the desired character replaces the flashing _ on the display.

   For example, to select **L**, press **4/JKL** four times (until **L** flashes on the display).
4. Press **SKIP/SEARCH** ▶▶/▶▶ once. The next _ in _ _ _ _ _ _ _ _ flashes.
5. Repeat Steps 3–4 until the display shows the new category name.

   Note: If you make a mistake, repeatedly press **SKIP/SEARCH** |◀◀/◀◀ or ▶▶/▶▶ until the incorrect character flashes, then enter the correct character.
6. After you enter the new category name, press **MEMORY** (next to **CLEAR**) on the CD changer to store it.

The new category name and **IS MEMORIZED** scrolls across the display (for example, **RAP IS MEMORIZED**).

Note: Use only the **MEMORY** button next to **CLEAR** on the CD changer to store a new subcategory name. (The **MEMORY** button next to **FM/TUNE MODE** below the display performs another function.)

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Creating and Assigning Subcategory Names

You can create up to 24 subcategory names that contains up to 8 characters (including letters, numbers, and special characters). When you create a new subcategory name, it is automatically assigned to the selected CD.

Note: Do not assign the same subcategory name to CDs under different categories. Otherwise, when you select and play the CDs under that subcategory name, you might hear CDs under an unexpected category.

1. With play stopped, select the desired CD.
2. Press **ENTER CATEGORY MAIN** on the CD changer. The category you previously assigned to the CD and **CATEGORY** flash on the display.
3. Repeatedly press **ENTER CATEGORY SUB** until _ _ _ _ _ _ _ _ appears on the display. **SUB CATEGORY** and the first _ flashes.
4. Repeatedly press the appropriate **DISC SELECT** key on the CD changer until the desired character replaces the flashing _ on the display. For example, to select L, press **4/JKL** four times (until **L** flashes on the display).
5. Press **SKIP/SEARCH** ►►/►► once. The next _ flashes.
6. Repeat Steps 4–5 until the display shows the complete new subcategory name.

   Note: If you make a mistake, repeatedly press **SKIP/SEARCH** |◄◄/◄◄ or ►►/►► until the incorrect character flashes, then enter the correct character.
7. To store the new subcategory name, press **MEMORY** (next to **CLEAR** on the CD changer).

   The stored category name, subcategory name, and **IS MEMORIZED** scrolls across the display (for example, **ROCK BEATLES IS MEMORIZED**).

   Note: Use only the **MEMORY** button next to **CLEAR** on the CD changer to store a new subcategory name. (The **MEMORY** button next to **FM/TUNE MODE** below the display performs another function.)

Changing/Erasing Category and Subcategory Names

When you change or erase a CD's category name, the CD changer automatically erases the previously assigned subcategory name. When you erase a subcategory name, the CD changer also automatically erases the category name.

Follow these steps to change a CD's category or subcategory name.

1. With play stopped, select the desired CD.
2. Press **ENTER CATEGORY MAIN** on the CD changer. If you want to change only the subcategory name, press **ENTER CATEGORY SUB** on the CD changer. The current category and/or subcategory name and **CATEGORY** or **SUB CATEGORY** flash.
3. Press **SKIP/SEARCH ►►/►►** once. The first letter of the category or subcategory name flashes.
4. Follow Steps 3–6 under "Creating and Assigning New Category Names" on Page 32 or Steps 4–7 under "Creating and Assigning Subcategory Names" on Page 33 to change the displayed category or subcategory name.

Follow these steps to erase a CD's category and subcategory name.

1. With play stopped, select the desired CD.
2. Press **ENTER CATEGORY MAIN** on the CD changer. The category name and **CATEGORY** flash on the display.
3. Press **CLEAR** on the CD changer. **PRESS CLEAR KEY AGAIN TO ERASE** scrolls across the display twice.
4. Press **CLEAR** on the CD changer again. **ERASED** briefly appears.

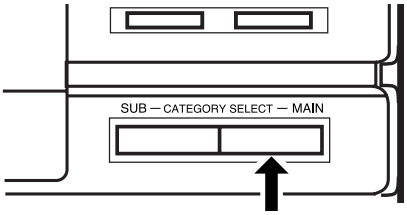
Note: If you clear a main category name and it is not stored in any of the other CDs, that category name is removed from the system's memory and is no longer a preset option.

Category/Subcategory Play

Note: You can randomly play tracks on CDs by category or subcategory (see "Random Play" on Page 29).

Follow these steps to play only those CDs assigned to a specific category or subcategory.

1. With play stopped, repeatedly press **CATEGORY SELECT MAIN** on the CD changer (or **CATEGORY MAIN** on the remote control) until **CATEGORY** and the category name appears.



   As each category name appears, the display shows only the disc numbers assigned to that category.

2. If desired, repeatedly press **CATEGORY SELECT SUB** on the CD changer (or **CATEGORY SUB** on the remote control) until the subcategory name appears. As each subcategory name appears, the display shows only the disc numbers assigned to that subcategory.

   Note: If you have not assigned a subcategory name to a disc number, **SUB CATEGORY NOT USED** scrolls across the display.

3. Press **PLAY/PAUSE** on the CD changer (or **CD ⏯** on the remote control). **PLAY** and ▷ appear, and **SEARCHING DISC** and the CD's disc number scroll across the display. After a few seconds, the first CD in the category or subcategory plays.

After playing all the CDs with the same category or subcategory name, the CD changer automatically stops but the category or subcategory stays selected.

To stop play before the CD changer automatically stops, press **STOP** any time.

To clear the category or subcategory selection, with play stopped, press **STOP** or turn the CD changer off.

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PROGRAMMED PLAY

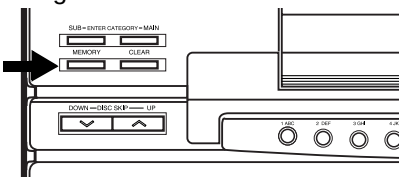
You can program up to 48 selections from all loaded CDs to play in any order you choose. A selection can be a single track or all tracks on a CD.

Notes:

- You can store a selection more than once in a programmed sequence.
- You cannot display the remaining time for the entire CD during programmed play.

Programming and Playing a Sequence

1. With play stopped, press **MEMORY** (next to **CLEAR**) on the CD changer.



   The current CD's number and **AL** (all tracks on the current CD) **1** appear on the display, and **PROG**. flashes.

2. Select the desired CD.

   Note: To store all tracks on the selected CD (as a single selection), skip Step 3.

3. Repeatedly press **SKIP/SEARCH** |◄◄/◄◄ or ►►/►► until the display shows the track you want to program.

4. Press **MEMORY** (next to **CLEAR**) on the CD changer. **PROG**. stops flashing, the CD changer programs your selection, and the number under **STEP** on the display indicates how many selections you have made.

5. Repeat Steps 2–4 to program more selections.

   Note: If you try to program more than 48 selections, **FULL** appears.

6. To play the programmed sequence, press **PLAY/PAUSE** on the CD changer (or **CD** ►/❚❚ on the remote control).

After the CD changer plays the last track in the programmed sequence, it stops.

Notes:

- The programmed sequence stays in memory after playback is over (see "Clearing the Programmed Sequence" on Page 38 for how to clear the programmed sequence).
- You can skip to other programmed tracks during programmed play.
- You can use audible search during programmed play by pressing and holding down **SKIP/SEARCH** |◄◄/◄◄ or ►►/►►. When the CD changer reaches the end of a track during audible search, it pauses at the beginning of the next programmed track. When the CD changer reaches the beginning of the current track, it pauses there.

Reviewing the Programmed Sequence

With play stopped, repeatedly press **MEMORY** (next to **CLEAR**) on the CD changer. The display shows the following programming information for each selection in the sequence.

- **DISC** and the selected CD's disc number
- **TRACK** and the track number or **AL** (all)
- **STEP** and the selection number. This number shows the sequence order in which the selection plays.

Adding Selections to the Programmed Sequence

Note: If you have already stored 48 selections in a programmed sequence, you cannot add more to it.

1. With play stopped, repeatedly press **MEMORY** (next to **CLEAR**) on the CD changer until -------- appears on the display.
2. Select the desired CD.

   Note: To store all the tracks on the selected CD (as a single selection), skip Step 3.
3. Repeatedly press **SKIP/SEARCH** |◄◄/◄◄ or ►►/►► until the display shows the track you want to program.
4. Press **MEMORY** (next to **CLEAR**) on the CD changer to store the selection.
5. Repeat Steps 2–4 as necessary to add selections to the programmed sequence.

Changing a Programmed Sequence

1. With play stopped, repeatedly press **MEMORY** (next to **CLEAR**) on the CD changer until the selection you want to change appears on the display.
2. Select the CD you want to change to.

   To change the displayed track number, repeatedly press **SKIP/ SEARCH** |◄◄/◄◄ or ►►/►► until the new track number appears.
3. Press **MEMORY** (next to **CLEAR**) on the CD changer to store the change.

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Clearing the Programmed Sequence

The CD changer saves a programmed sequence as long as power is supplied to the CD changer. To clear a programmed sequence, press **STOP** or **CLEAR** when a CD is not playing and CD is the selected function.

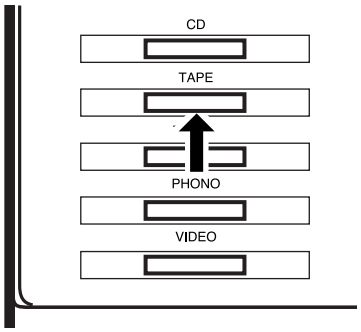
CD CARE TIPS

Even though a CD is very durable, you should handle it with care.

- Keep the CD inside the CD changer or in its protective case or sleeve when you are not playing it.
- Handle a CD by its edges to avoid fingerprints which can prevent the CD changer's laser beam from accurately reading the CD. Your local RadioShack store sells a suitable CD cleaner kit.
- Do not write on either side of the CD, particularly the non-label side. (Signals are read from the non-label side.)
- Keep the CD dry. A water drop can act as a lens and affect the laser beam's focus.
- If a CD skips or the CD changer displays **DISC ERROR** when you try to play it, the CD might be scratched. Your local RadioShack store sells a Scratch 'n Fix kit (Cat. No. 42-127) that might help remove the scratch and stop the skip (see "Troubleshooting" on Page 46).
- Never use chemicals such as record cleaning sprays, anti-static sprays or fluids, benzene, or thinner to clean CDs. These chemicals will permanently damage the CD's plastic surface.

USING THE CASSETTE DECK

Press **TAPE** on the system to select the cassette deck function.

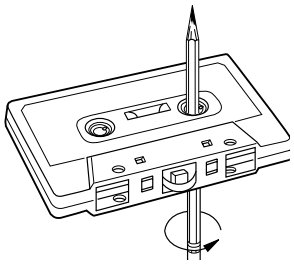


Note: While playing or recording on one deck, use only the controls on that deck.

LOADING A CASSETTE TAPE

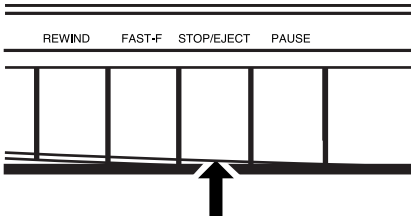
Cautions:

- Before you load a cassette, take up any tape slack by turning the tape hub with a pencil or your finger. Loose tape can easily get tangled in your cassette deck's mechanism.

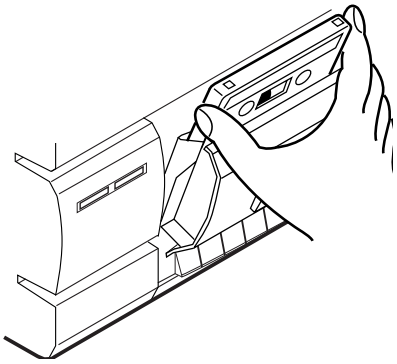


- Use only Type-1 (normal-bias) or Type-2 (CrO_2) tapes. Your local RadioShack store sells a complete selection of blank tapes.
- Do not use C-120 tapes because they are very thin and can easily get tangled in your cassette deck's mechanism.

1. Press **STOP/EJECT** on either Deck 1 or Deck 2 to open the cassette compartment door.



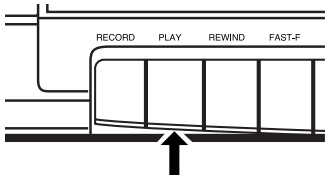
2. Load the cassette with its open edge facing down, its full reel to the left, and the side you want to play facing you.



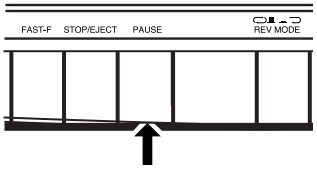
3. Gently close the compartment door.

PLAYING A CASSETTE TAPE

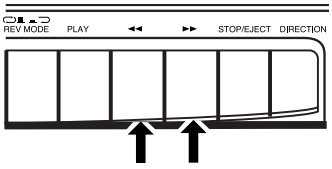
1. Press **PLAY** to start play.



- Press **PAUSE** on Deck 1 to temporarily stop playback. To resume playback, press **PAUSE** again.

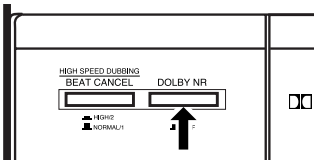


- Press **FAST-F/▶▶** to fast-forward, or press **REWIND/◀◀** to rewind the tape. When the tape reaches the desired location, press **STOP/EJECT**.



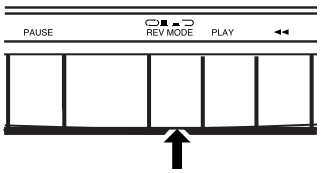
Do not press **FAST-F/▶▶** or **REWIND/◀◀** on the other deck, or the sound quality might deteriorate.

2. If the tape is marked DOLBY NR, set **DOLBY NR** to **ON**. Otherwise, set **DOLBY NR** to **OFF** (see "Using Dolby Noise Reduction" on Page 41).

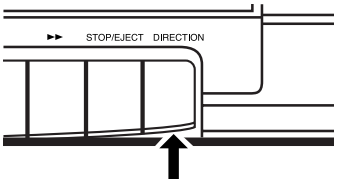


3. If you use Deck 2:

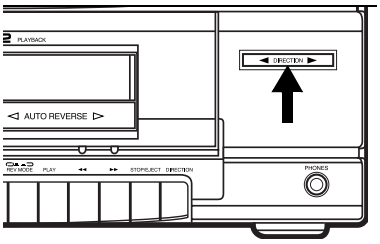
- Press in **REV MODE** to play both sides of the tape one time, or press out **REV MODE** to continuously play both sides of the tape.



- Press **DIRECTION** to immediately play the other side of the cassette tape.



The **DIRECTION** indicator shows the playback tape direction — **DIRECTION** ► (normal playback) or ◄ **DIRECTION** (reverse playback).



Caution: When the tape in Deck 2 reaches the end during fast-forward or rewind, press **STOP/EJECT** to release the mechanism.

Note: Deck 1 has a full-release auto stop system to protect the tape and prevent pinch roller damage. When the tape reaches the end during playback, recording, fast-forward, or rewind, the tape mechanism in Deck 1 automatically releases.

4. Press **STOP/EJECT** to stop playback at any time.

USING CONSECUTIVE PLAY (DECK 2 TO DECK 1)

You can set the tape player to play both sides of the tape in Deck 2, then automatically play one side of the tape in Deck 1.

1. Press in **REV MODE** on Deck 2.
2. Press **PLAY** on Deck 2. The cassette in Deck 2 plays.
3. While the cassette in Deck 2 is playing, press **PAUSE** then **PLAY** on Deck 1.

When the cassette in Deck 2 finishes playing both sides, the cassette tape in Deck 1 automatically begins playback.

USING DOLBY NOISE REDUCTION

The System 745's cassette Deck uses the Dolby-B NR (noise reduction) system which lowers the level of background noise or "tape hiss" to one third of the original level.

When listening to a recording, set **DOLBY NR ON/OFF** to the setting used when it was recorded.

RECORDING

You can use the System 745 to record onto a cassette tape from the following sources:

- Another cassette tape
- CD changer
- Tuner
- Audio source

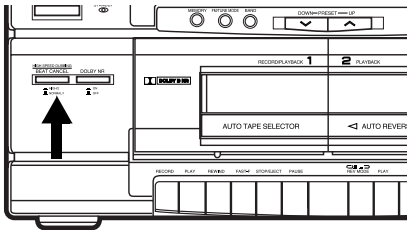
Notes:

- Before you record on a cassette tape, make sure the cassette's erase-protection tabs are in place (see "Preventing Accidental Erasure" on Page 45).
- The recording level is preset. Pressing **E-BASS** or adjusting **MASTER VOLUME** (or **MASTER VOL –** or **MASTER VOL +** on the remote control) does not affect the recording level or quality.

Dubbing (Copying) Cassette Tapes

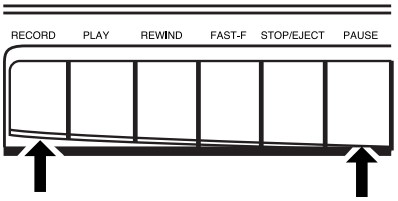
You can use the cassette deck's synchro dubbing feature to easily copy a tape from Deck 2 to Deck 1. You can choose between normal and high-speed dubbing, and you can monitor the tape as you dub it.

1. Load the cassette you want to copy from into Deck 2.
2. Load a blank cassette, or one you want to record over, into Deck 1.
3. Set the dubbing speed.
   - To record in half the normal recording time, press **HIGH SPEED DUBBING/BEAT CANCEL** so it clicks and stays in.



   - To record at normal speed for better quality sound, press **HIGH SPEED DUBBING/BEAT CANCEL** so it clicks and stays out.

   Caution: Do not change the dubbing speed while dubbing. Doing so might cause a distorted recording or damage the tape.
4. On Deck 1, press **PAUSE** then **RECORD**. **RECORD** and **PLAY** on Deck 1 automatically lock down.



   Caution: Do not force down **RECORD**. This can damage the recording mechanism.
5. On Deck 2, press **PLAY**. **PAUSE** on Deck 1 releases, and the system copies the tape in Deck 2 onto the tape in Deck 1.

Note: To monitor the tape while it is copying, adjust **MASTER VOLUME** (or **MASTER VOL –** or **MASTER VOL +** on the remote control) to a comfortable listening level.

6. To stop copying, press **STOP/EJECT** on both decks.

Notes:

- If the cassette tape in Deck 1 stops before the tape in Deck 2, the cassette tape in Deck 2 continues to play at normal speed.
- If the cassette tape in Deck 2 stops before the tape in Deck 1, Deck 1 records silence. Press **STOP/EJECT** on Deck 1 when Deck 2 stops.
- If the original tape was recorded using Dolby NR, the copy also has Dolby NR, regardless of the position of the **DOLBY NR** switch. If the tape you copy does not have Dolby NR, you cannot add it to the tape you record.

Dubbing (Copying) CDs

1. Press **CD**.
2. If you want to record a program of CD selections, follow the steps in “Programming and Playing a Sequence” on Page 36 to program the CD playback.
3. Load a blank cassette tape, or one you want to record over, into Deck 1.
4. Press **PLAY** on Deck 1, wait for the blank tape to play past the tape leader (about 8 seconds), then press **STOP/EJECT** on Deck 1.
5. Select the CD you want to record from, then press **PLAY/PAUSE** on the CD changer (or **CD ⏯** on the remote control) twice to pause the CD.
6. On Deck 1, press **PAUSE** then **RECORD**. **RECORD** and **PLAY** on Deck 1 automatically lock down.

   Caution: Do not force down **RECORD**. This can damage the recording mechanism.
7. Simultaneously press **PAUSE** on Deck 1 and **PLAY/PAUSE** on the CD changer (or **CD ⏯** on the remote control). The CD starts playing from Track 1 or at the beginning of a programmed sequence, and the cassette records until it reaches the end of the side.
8. When you finish recording, press **STOP** on the CD changer, then press **STOP/EJECT** on the tape deck.

   Press **STOP/EJECT** again to open the cassette compartment and remove the cassette tape.

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Recording from the Tuner or an Audio Source

You can record from the tuner or from an external audio source connected to the System 745, such as a turntable, a VCR, or video equipment.

1. Load a blank cassette tape, or one you want to record over, into Deck 1.
2. Press **PLAY** on Deck 1, wait for the blank tape to play past the tape leader (about 8 seconds), then press **STOP/EJECT** on Deck 1.
3. Press **TUNER**, **PHONO**, or **VIDEO** to select the audio source you want to record from.
4. On Deck 1, press **PAUSE** then **RECORD**. **RECORD** and **PLAY** on Deck 1 automatically lock down.

   Caution: Do not force down **RECORD**. This can damage the recording mechanism.
5. Simultaneously press **PAUSE** on Deck 1 and start the selected audio source (if necessary). The cassette records until it reaches the end of the side, then it automatically stops.

   Note: To pause recording, press **PAUSE** on Deck 1. To resume recording, press **PAUSE** again.
6. To completely stop recording before it automatically stops, stop the selected audio source (if necessary), then press **STOP/EJECT** on Deck 1. Press **STOP/EJECT** again to open the cassette compartment and remove the cassette tape.

Note: When you play back a cassette tape on which you recorded an AM radio program, you might hear a high-pitched tone or whistling sound. This is called a beat. To reduce the beat while playing a tape, set **HIGH SPEED DUBBING/BEAT CANCEL** on the tape deck to **NORMAL/1** or **HIGH/2** and leave the switch on the setting that gives the best recording quality.

TAPE TIPS

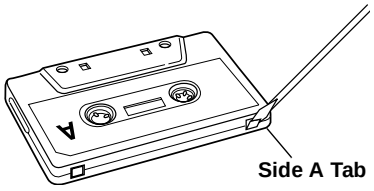
Storing Cassettes

Do not store cassette tapes in places with high temperature or high humidity or where large amounts of dust or dirt exist.

Preventing Accidental Erasure

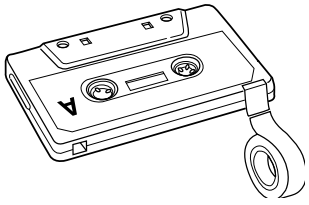
Cassettes have two erase-protection tabs, one for each recording side.

To protect a recording from being accidentally recorded over or erased, use a screwdriver to remove one or both tabs.



If you want to record on a cassette that has had its tab removed, put a piece of heavy plastic tape over the recording tab hole.

Be sure you cover only the hole originally covered by the erase-protection tab.



Caution: Removing the erase-protection tab does not prevent a bulk tape eraser from erasing a cassette.

Erasing a Cassette Tape

To erase a cassette tape, select an audio source with no audio playing, then simply record as usual. The cassette deck records silence over the previous recording.

You can quickly erase both sides of a cassette tape using a bulk tape eraser such as Cat. No. 44-232, available at your local RadioShack store.

Restoring Tape Tension and Sound Quality

After you play a cassette tape several times, the tape might become tightly wound on the reels. This can cause playback sound quality to deteriorate.

To restore the sound quality, fast-forward the tape from the beginning to the end of one side, then completely rewind it. Then loosen the tape reels by gently tapping each side of the cassette's outer shell on a flat surface.

Caution: Be careful not to damage the cassette when tapping it. Do not touch the exposed tape or allow any sharp objects near the cassette.

TROUBLESHOOTING

If your system is not working as it should, these suggestions might help you eliminate the problem. If the system still does not operate properly, take it to your local RadioShack store for assistance.

Symptom	Possible Cause	Suggestion
No power when **POWER** is pressed on system.	Power problem.	Check the power cord and AC outlet.
No sound.	**MASTER VOLUME MIN/MAX** set to **MIN**.	Adjust **MASTER VOLUME MIN/MAX**.
	Wrong function is selected	Select the correct function.
	Speakers connected incorrectly.	Check speaker connections.
Sound from one speaker only.	Speakers connected incorrectly.	Check speaker connections.
	BALANCE is set incorrectly.	Adjust **BALANCE**.
CD changer does not work.	CD not selected.	Press **CD** on the system or **CD** ⏯ on the remote control.
	CD loaded incorrectly.	Remove the CD and reload it.
M-ERROR scrolls across the display.	System memory must be reset.	Reset the system (see "Resetting the System" on Page 14).
DISC ERROR scrolls across the display, or the graphic around the disc number blinks on the display.	CD loaded incorrectly.	Remove the CD and reload it.
Sound from CD skips.	CD is dirty or damaged.	Clean the CD and reload it, or try a new one.

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Symptom	Possible Cause	Suggestion
Abnormal CD or display operation.	System memory must be reset.	Reset the system (see "Resetting the System" on Page 14).
Poor sound quality during cassette tape playback.	Cassette tape heads, capstans, tape guides, or pinch rollers are dirty.	Clean the cassette tape decks (see "Cleaning the Tape-Handling Parts" on Page 49).
Cannot record.	Erase-protection tabs are removed from the cassette tape.	Put tape over the erase-protection tab holes (see "Tape Tips" on Page 45).
Output sound is not stereo.	**FM/TUNE MODE** set to **MONO**.	Repeatedly press **FM/TUNE MODE** until **AUTO STEREO** appears on the display.
	The station you are listening to is an AM station, or an FM station that you are not receiving in stereo.	Tune to an FM stereo station.
Poor sound quality when playing back a recording of an AM radio program.	**HIGH SPEED DUBBING/BEAT CANCEL** must be set.	Press **HIGH SPEED DUBBING/BEAT CANCEL** to whichever position, **HIGH/2** (in) or **NORMAL/1** (out) that gives the best recording quality.
Flickering **STEREO** indicator.	Weak signal.	Reorient the FM antenna or install an outdoor FM antenna.
Remote control does not work.	Batteries in the remote control are weak.	Replace the batteries with fresh ones (see "Putting Batteries in the Remote Control" on Page 13).

CARE AND MAINTENANCE

Your Optimus System 745 Stereo Rack System is an example of superior design and craftsmanship. The following suggestions will help you care for the system so you can enjoy it for years.

Keep the system dry. If it gets wet, wipe it dry immediately. Liquids can contain minerals that can corrode the electronic circuits.

Use and store the system only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries in the remote control, and distort or melt plastic parts.

Keep the system away from dust and dirt, which can cause premature wear of parts.

Handle the system gently and carefully. Dropping it can damage circuit boards and cases, and can cause the system to work improperly.

Use only fresh batteries of the required size and type in the remote control. Always remove old or weak batteries. They can leak chemicals that destroy electronic circuits.

Wipe the system with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the system.

Caution: Gently clean the speakers with a feather duster. Do not use a vacuum cleaner. The vacuum action can permanently damage speaker elements.

Modifying or tampering with the system's internal parts can cause a malfunction and might invalidate your system's warranty and void your FCC authorization to operate it. If your system is not working as it should, take it to your local RadioShack store for assistance.

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CLEANING THE TAPE-HANDLING PARTS

Dirt, dust or particles of the tape's coating can accumulate on the tape heads and other parts that the tape touches. This can greatly reduce the cassette player's performance. To prevent noise and poor high-frequency response, clean the cassette player's tape-handling parts after every 20 hours of use. Your local RadioShack store sells a complete line of cassette deck cleaning supplies.

Follow these steps to clean the tape-handling parts on your system's cassette decks.

1. Turn off the system, then unplug its power cord.

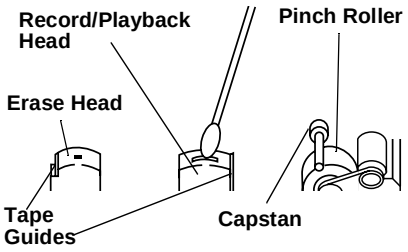
   Note: Unplugging the SYSTEM 745 clears the CD changer's programmed sequence memory but does not clear stations in memory or category/subcategory names.

2. Press **STOP/EJECT** on both cassette decks. Both cassette compartment doors open.

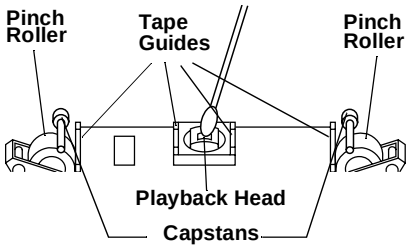
3. Press **PLAY** on both cassette decks to expose the tape-handling parts.

4. Use a cotton swab dipped in denatured alcohol or tape head cleaning solution to gently clean the record/play heads, pinch rollers, capstans, tape guides, and erase head.

Deck 1



Deck 2



5. When you finish cleaning, press **STOP/EJECT** on both cassette decks to release the play mechanisms, then close both cassette compartment doors and reconnect power.

SPECIFICATIONS

GENERAL

Power Requirements ..... 120V AC (±10%), 60 Hz

Power Consumption ..... 230 Watts

Main Console Dimensions (HWD) ..... $16\frac{1}{2} \times 16\frac{1}{2} \times 18\frac{1}{8}$ Inches (420 × 420 × 460 mm)

Weight ..... 36 lb (16.3 kg)

AMPLIFIER

Main Amplifier

Continuous minimum sine wave RMS power output per channel at 8 ohms, 40 Hz-20 kHz with no more than 0.9% total harmonic distortion (with Center/Surround amplifier off) .....100 Watts

Center Amplifier

Continuous minimum sine wave RMS power output at 1 kHz into 8 ohms with no more than 0.9% total harmonic distortion (with Main/Surround amplifier off) 15 Watts

Surround Amplifier

Continuous minimum sine wave RMS power output per channel at 1 kHz into 8 ohms with no more than 0.9% total harmonic distortion (with Main/Center amplifier off) .....15 Watts

Bass Control ..... ±10 dB (100 Hz)

Treble Control ..... ±10 dB (10 kHz)

E-BASS Control ..... +10 dB (100 Hz)

Input Sensitivity/Impedance:
PHONO ..... 3.0 mV/47 kOhm

Nominal Output Impedance:
Speaker Terminals ..... 8 Ohms
PHONES Jack ..... 8–32 Ohms

TUNER (FM) Frequency Range: In 200 kHz Steps ..... 87.9–107.9 MHz
In 50 kHz Steps ..... 87.5–108.0 MHz

Usable Sensitivity (Mono) ..... 19.2 dBf

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TUNER (AM) Frequency Range: In 10 kHz Steps ..... 520–1710 kHz
In 9 kHz Steps ..... 522–1710 kHz

Sensitivity (with supplied AM Loop antenna): ..... 900 µV/M

CD CHANGER

CD Transport Type ..... 24–Disc Bidirectional Radial

Frequency Response ..... 20 Hz–20 kHz

Signal-to-Noise Ratio ..... 73 dB

Wow & Flutter ..... Undetectable

CD Used ..... 5–inch (120 mm)

Sampling Frequency ..... 44.1 kHz

Optical Source ..... 3-Beam Semiconductor Laser

Number of Channels ..... 2, Stereo

DUAL CASSETTE DECK

Frequency Response ..... 63 Hz–10 kHz (Normal Tape, Playback)
60 Hz–14 kHz (CrO_2 Tape, Playback)

Track Format ..... 4 Tracks, 2 Channels

Signal-to-Noise Ratio (with Dolby NR ON) ..... 50 dB

Wow & Flutter ..... 0.18% (WRMS)

Fast-Forward/Rewind Time: Deck 1 ..... About 115 seconds (with C-60 tape)
Deck 2 ..... About 160 seconds (with C-60 tape)

INFRARED REMOTE CONTROL

Controls ..... 24 keys

Power Requirements ..... 3VDC (Two AA batteries)

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

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Limited One-Year Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for one (1) year from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, Dept. W, 100 Throckmorton St., Suite 600, Fort Worth, TX 76102

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